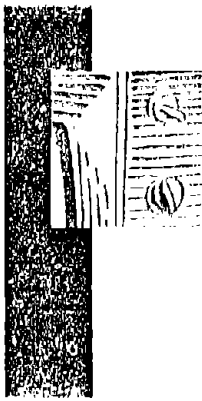


Are You Ready?

Your guide to disaster preparedness

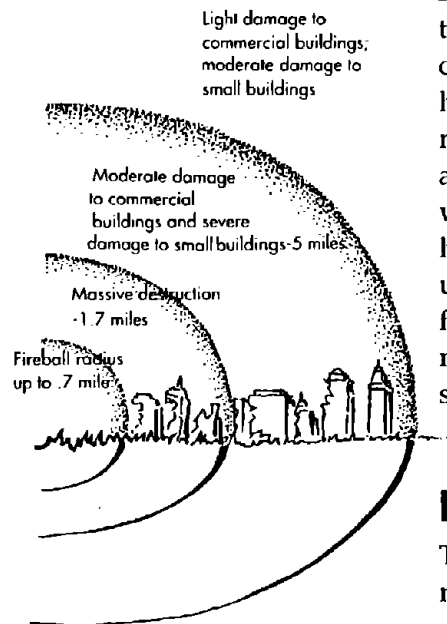


FEDERAL EMERGENCY MANAGEMENT AGENCY
WASHINGTON, D.C. 20472



In addition to the natural and technological hazards described in this publication, Americans face other dangers which could have far greater consequences. These are threats to the country's national security — such as a nuclear or conventional weapons attack — posed by other governments or extremist groups.

Is the United States at risk? Unfortunately, the answer is yes. No one can predict the future or control how other countries or leaders might use their weapons. As long as nuclear, chemical and biological weapons exist, there is a chance, however unlikely, that they will be used some day. There is no need for undue alarm. But there is a need for awareness and an understanding of security threats.



While the level of devastation depends on many factors, the damage from the direct effects of a one megaton nuclear surface burst can reach up to eight miles.

Nuclear weapons

The number of countries with nuclear weapons capabilities is growing. And the very existence of nuclear weapons around the world poses the greatest threat of all. Dangers could emerge from a strategic attack on the United States, a nuclear war between two other countries, an accidental

launching of a nuclear warhead or a major accident at a nuclear weapons storage facility.

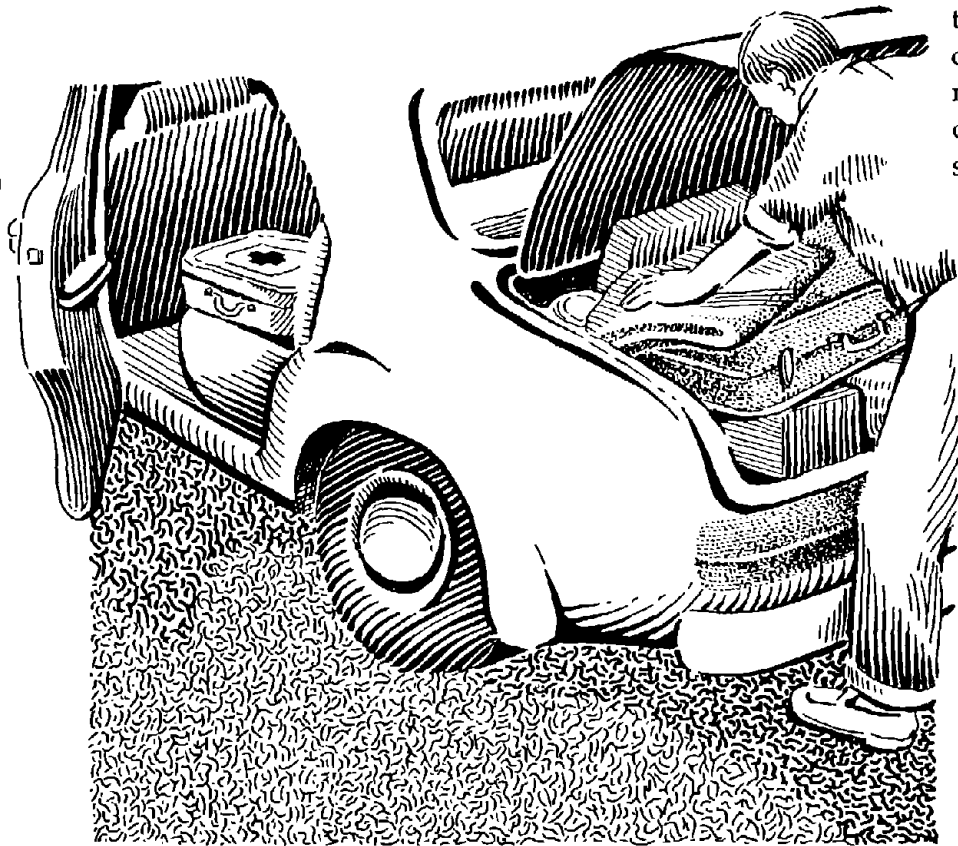
Understanding the effects of nuclear weapons — knowing what could happen and how to respond — is critical to survival. Millions of people who would otherwise die or be seriously injured in a major nationwide attack could save themselves if they take steps now to prepare and learn what to do if a nuclear weapon is detonated.

Direct weapon effects: protection

Nuclear weapons produce deadly direct effects — blinding light, intense heat and thermal radiation that causes fires, nuclear radiation and a blast wave similar to a tidal wave of air. The level of devastation depends on the size and type of weapon, the weather, terrain and height of explosion. These direct effects can extend miles from the point of impact, known as "ground zero."

There is no way of knowing how much warning time there would be before an attack. A surprise attack on the U.S. remains possible,





Evacuation

The largest peacetime evacuation occurred during Hurricane Elena in 1985 when 1.5 million people evacuated coastline areas in the Gulf states.

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People are forced to evacuate more often than you may realize. Hundreds of times each year, transportation or industrial accidents release harmful substances, forcing thousands of people to leave their homes and go to a safer area. Fires and floods cause evacuation even more frequently. And almost every year, people in cities and communities along the Gulf and Atlantic coasts evacuate in the face of approaching hurricanes.

As a result, local evacuation planning has been in progress for several years in many parts of the country. Specific evacuation plans vary by area and by disaster, so contact your local emergency management or civil defense office for your community's plans.

In the event of rising international tensions, government authorities could evacuate people to areas not considered likely targets for nuclear attack. For example, this could occur during a crisis buildup if U.S. intelligence detected a readying of an enemy's nuclear systems, evacuation of its cities, movement of officials to shelter or protection of industrial sites. The Federal government is responsible

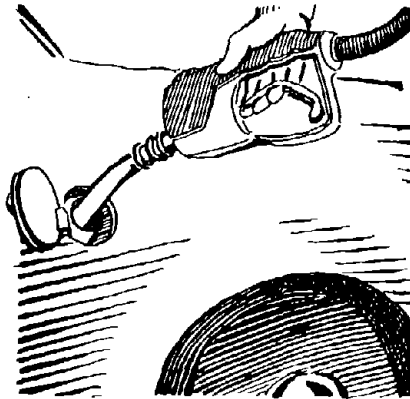
for working with state and local governments to develop large-scale evacuation plans for areas considered potential nuclear targets.

How much time you will have to evacuate

The amount of time you will have to evacuate your home or community depends on the disaster. Sometimes, you may have days to prepare: Hurricanes can be detected early, and in case of the possibility of a nuclear attack, rising international tensions would signal that preparations were necessary. However, in many more common disasters, such as a hazardous materials spill, you may have only moments to leave. This means you must prepare yourself *now*, because once you need to evacuate, it may be too late to collect even the most basic necessities.

Evacuation periods

Evacuation periods can last for hours or several days. For part, or all, of this time, you may be responsible for your own food, clothing and other supplies until help arrives or utilities are repaired. In



Keep fuel in your car at all times. During emergencies, filling stations may be closed.



some cases, you may need to take care of yourself without outside help for an average time of 72 hours, or three days. In event of a nuclear attack, families should be prepared to be self-sufficient for at least two weeks, while living in a shelter. Some mass shelters, such as those operated by the Red Cross, will be prepared to feed you.

Advance planning for evacuation

1. Use the *Checklists* chapter to gather emergency supplies for you and your family in case of evacuation. Collect these crucial materials, especially food and water, well in advance of disaster — once you are told to evacuate, you may have only minutes to leave.

2. Review possible evacuation procedures with your family so that everyone understands what to do and where to meet if you are separated.

- Ask a friend or relative outside your area to be the “checkpoint” so that everyone in the family can call that person to say they are safe.

- Find out where children will be sent if they are in school when an evacuation is announced.

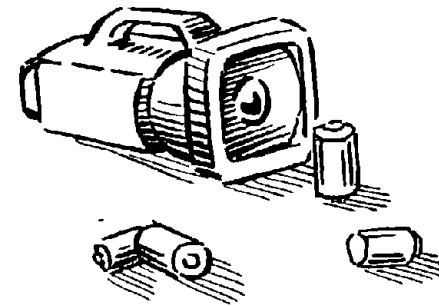
3. Plan now where you would go if you had to evacuate.

- Consider the homes of relatives or friends who live nearby but outside the potential disaster area.
- Contact the local emergency management or civil defense office for community evacuation plans. Review public information to identify reception centers and shelter areas. These may be schools, churches, national guard armories or other public buildings.

4. Keep fuel in your car at all times. During emergencies, filling stations may be closed. Never store extra fuel in the garage.

5. If you do not have a car or other vehicle, make transportation arrangements with friends, neighbors or your local emergency management office.

6. Know where and how to shut off electricity, gas and water at main switches and valves. Make sure you have the tools you would need to do this (usually pipe and



Flashlights and batteries are important emergency supplies. But if you suspect a gas leak in your home, do not use a flashlight. The light itself could cause an explosion.



crescent or adjustable wrenches). Check with your local utilities for instructions.

What to do when you are told to evacuate

1. If there is time, secure your house.

- Unplug appliances.
- Turn off natural gas, propane or other fuel valves where they enter the house. In a flood hazard area, store propane tanks or secure them safely to the structure.
- Turn off the main water valve.
- Take any actions needed to prevent damage to water pipes by freezing weather, if this is a threat.
- Securely close and lock all doors, windows and garage.
- Place a sign on the front door or window to notify authorities that your house or apartment has been evacuated and no one remains inside. If possible, leave a number where you can be reached.

2. Follow recommended evacuation routes. Do not take shortcuts! They may be blocked.

3. Listen to the radio for emergency shelter information.

4. Carry a family safety kit. See the *Checklists* chapter for important information.

Returning home

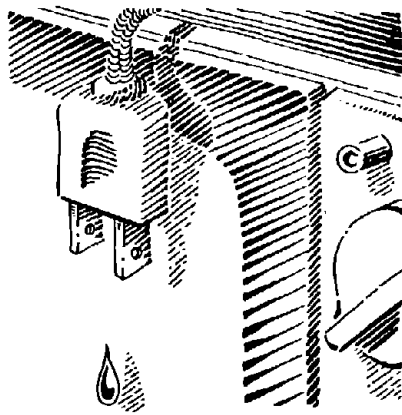
1. Do not return to the emergency site until local authorities say it is safe.

2. Continue listening to the radio for information and instructions.

3. Use extreme caution when entering or working in buildings — structures may have been damaged or weakened. Beware of poisonous snakes in flooded structures and debris.

4. Do not take lanterns, torches or any kind of flame into a damaged building. There may be leaking gas or other flammable materials present. Use battery-operated flashlights for light. But if you suspect a gas leak, do not use any kind of light! The light itself could cause an explosion.

5. If you smell leaking gas, turn off the main gas valve at the meter.



If any appliances are wet, turn off the main electrical power switch before you unplug them.



- Do not turn on lights — they can produce sparks that will ignite the gas.
- Leave the house immediately and notify the gas company or the police.
- Do not reenter the house until an authorized person tells you it is safe to do so.

6. Notify the power company or fire department if you see fallen or damaged electrical wires.

7. If any of your appliances are wet, turn off the main electrical power switch in your home before you unplug them. Dry out appliances, wall switches and sockets before you plug them in again — call utility companies for guidance.

8. Check food and water supplies for contamination and spoilage before using them. Follow specific instructions from your local health department or agriculture extension agency.

9. Wear sturdy shoes when walking through debris or broken glass, and use heavy gloves when removing debris.

10. Do not visit the disaster area unless authorities have given you permission.

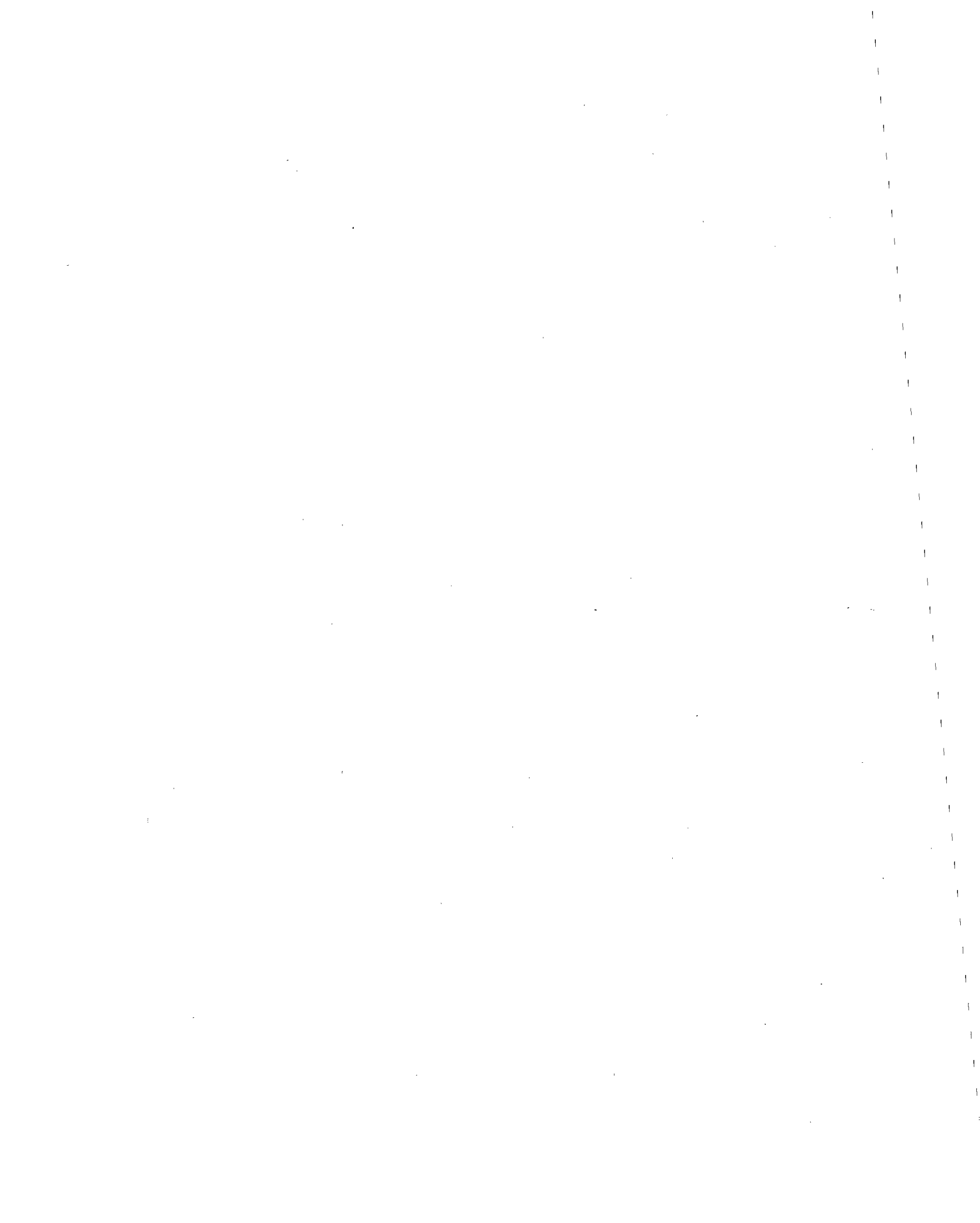
11. After the emergency has passed, telephone or telegraph your family and friends to tell them you are safe.

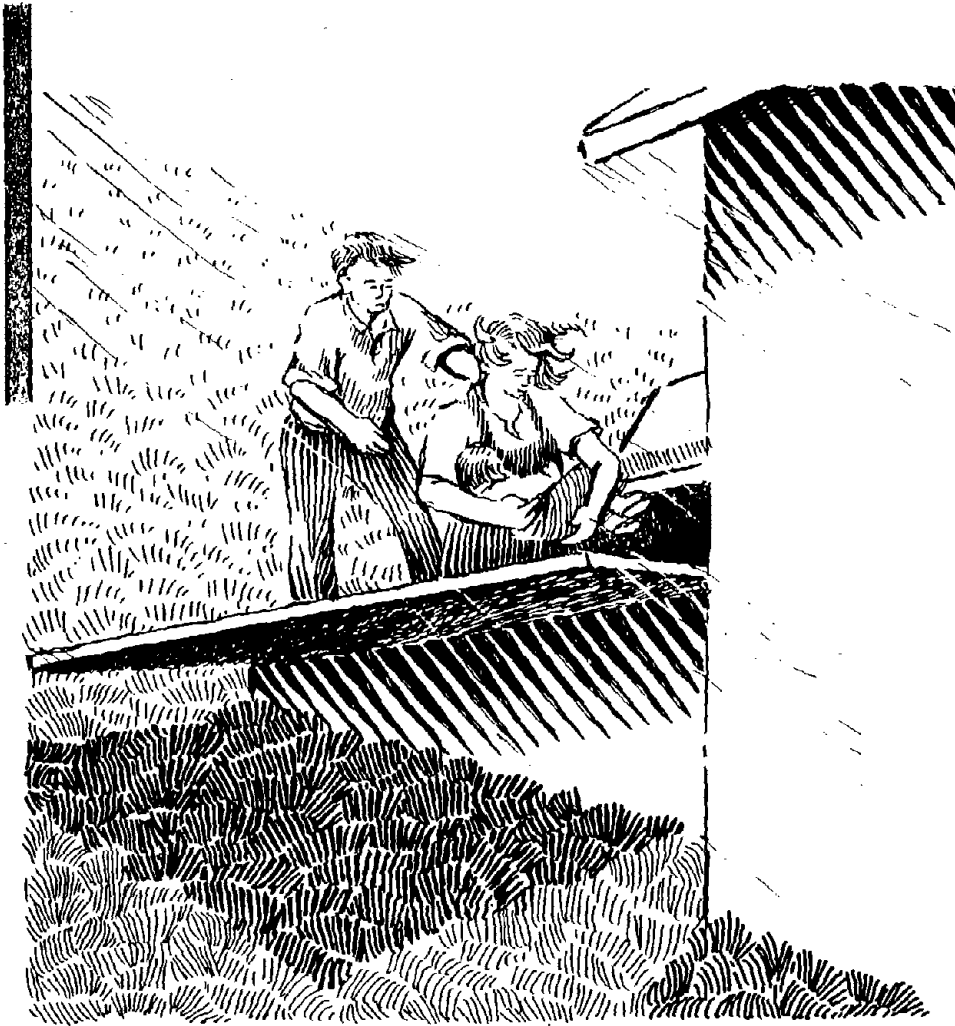
For more information

Contact your local civil defense or emergency management office or the Federal Emergency Management Agency, P.O. Box 70274, Washington, D.C. 20024, ATTN: Publications, for the following publications. (Single copy requests only.)

FEMA 183 (September 1989) Hosting in an Emergency. Information for citizens who may be willing to host evacuees in an emergency.

Emergency Preparedness Checklist (L-154). Also available in Braille or recorded versions. This pamphlet provides general information for personal and family preparedness for a variety of natural and man made disasters.

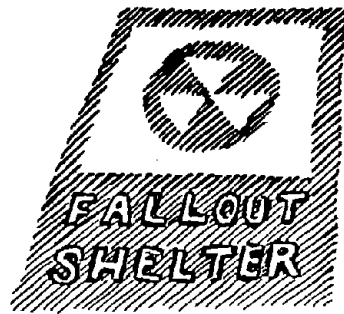
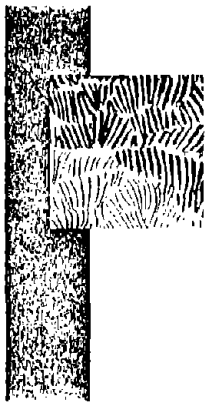




Shelter

In 1989, following Hurricane Hugo and the Loma Prieta earthquake, the American Red Cross provided 200,000 beds in 806 shelters. Volunteer organizations served over 13 million meals.

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Designated public fallout shelters include churches, subways, mines and caves. Some are marked with a yellow and black fallout shelter sign.

During any disaster or emergency, there is a possibility that you and your family will need to take shelter. This may mean staying inside your home after a hazardous materials spill or living in a basement shelter after a nuclear blast. Often during some emergencies, local authorities and the Red Cross may house people in public shelters: schools, municipal buildings, churches and many other structures.

Public shelters may not offer food, water, medicine or in some cases, even basic sanitary facilities. You should collect the emergency supplies listed in the *Checklists* chapter, so your family will have a more comfortable stay in either a home or public shelter during any emergency.

As you learn about the various threats that may arise in your area — from hazardous materials incidents to hurricanes — find out from your local civil defense or emergency management office what kind of shelter facilities are available and what you might need to do on your own.

Shelter from nuclear attack

Taking shelter during a nuclear attack is absolutely necessary. There are two kinds of shelters — blast and fallout.

Blast shelters offer some protection against blast pressure, initial radiation, heat and fire. However, even a blast shelter could not withstand a direct hit from a nuclear detonation. If you live in an area which has been identified as a likely target, make plans to evacuate to a safer place in times of nuclear emergency.

Fallout shelters do not need to be a special type of building. They can be any protected space, provided that the walls and roof are thick and dense enough to absorb the radiation given off by fallout particles. The more shielding — heavy dense materials such as concrete, bricks and earth — between you and the fallout particles, the safer you will be.

In addition to shielding, putting physical distance between you and the fallout particles is advised. For example, the center area of a middle floor of a high-rise apartment building offers more protection than an outside wall on the



first floor, because there would be more distance between you and the radioactive fallout. However, in a typical home basement, a below-ground corner offers the best protection because it provides better shielding.

Time is also a factor in protecting yourself from radiation. Fallout decays relatively rapidly, and most people would be able to leave their shelters after a week or two. Remember that any protection, however temporary, is better than none at all.

Planning for shelter before a nuclear attack

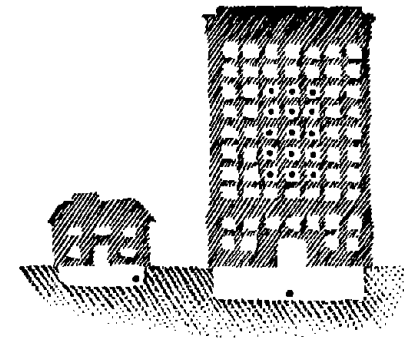
1. Find out what public buildings have been designated as fallout shelters in your community.
 - Call your local civil defense or emergency management office.
 - Look for yellow and black fallout shelter signs on public buildings.
 - If no noticeable or official designations have been made, make your own list of potential shelters near your home, workplace or school, such as basements or the center, windowless area of

middle floors in high-rise buildings as well as subways, tunnels, caves or mines.

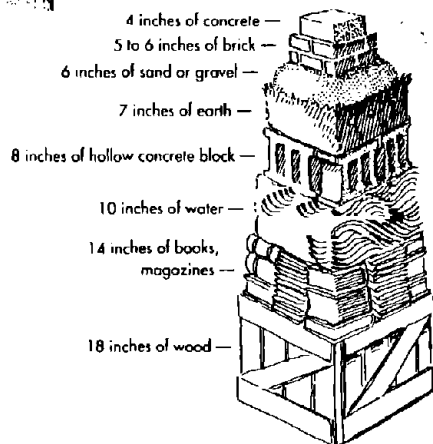
- Give your family clear instructions about where fallout shelters are located and what actions to take in case of an attack. See the *National Emergency* chapter for additional information.

2. In many suburban and rural areas, there are few public shelters, so consider building a permanent fallout shelter at home.

- A basement, or any underground area, is the best place to build a fallout shelter. Often, few major changes are necessary, especially if the structure has two or more stories and its basement — or one corner of it — is below ground.
- Fallout shelters can be used for storage during non-emergency periods.
- Specific building plans for home-basement and outdoor-permanent shelters (both fallout and blast) are available. See the information section at the end of this chapter.



Potential fallout shelters include the basements of large or small buildings, or the center, windowless area on middle floors of high-rise buildings.



3. Gather enough food and supplies for each family member for two weeks of shelter living. See the recommendations in the *Checklists* chapter.

Improvising fallout shelters during imminent nuclear attack

1. If an attack is imminent and you have no immediate access to a permanent shelter, improvise a shelter for yourself and your family.

2. The more shielding materials you use, the more protection you will have against fallout radiation. The following shielding materials can be used:

- Concrete bricks, earth and sand are some of the materials that are dense or heavy enough to provide fallout protection.
- House doors, especially heavy outside doors. If you use paneled or hollow core doors, stack them in double layers.
- Dressers, chests, bookcases, trunks, boxes or cartons. Fill them with sand or earth after

they are in position, so they are not too heavy or will not collapse while being carried.

- Piles of books and magazines or stacks of firewood or lumber.
- Flagstone from outside walks and patios.

3. If you build a shelter in your basement, start by setting up a large sturdy table or workbench in the corner that is deepest below ground level.

- Place on the table as much shielding material as it will hold without collapsing.
- Then place as much shielding material *around* the table as you can; then stack up the material as high as the table top.
- Finally, once everyone is inside the shelter, block the opening with additional shielding materials.

4. If you do not have a large table or workbench, or if you think you and your family will need more shelter space, use furniture — such as earth-filled dressers or chests — to form the walls of your shelter as large as you require.

- For the shelter “ceiling” use heavy outside doors or reinforced hollow core doors.



- Pile as much shielding material on top of the doors as they will hold; use reinforcing supports in the middle of the ceiling if you need to prevent sagging and collapse.
- Stack shielding material outside shelter "walls."
- Once everyone is inside the shelter, close off the opening with additional shielding material, while allowing for ventilation.

5. You can also use an existing below-ground storm cellar as an improvised fallout shelter. Additional shielding may be required for adequate protection.

- If the roof of the storm cellar is made of wood or other light material, reinforce it with additional shielding for overhead protection.
- It may be necessary to shore up the roof with lumber or timbers to support the added shielding weight.
- Improve protection by blocking the entrance from the inside with eight-inch concrete blocks or an equivalent thickness of earth, sandbags or bricks after everyone is inside the shelter.

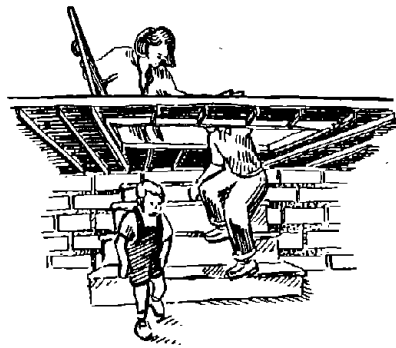
- Raise the outside door of the cellar occasionally to knock off any fallout particles that may have collected on it. Keep particles from entering the cellar.

6. If your home has a crawl space between the first floor and ground underneath and is set on foundation walls (not on pillars), you may be able to improvise shelter protection for your family.

- Gain access to the crawl space through the floor or an outside foundation wall.
- Select the portion of the crawl space area that is under the center of the house, as far away as possible from any outside foundation wall.
- Put shielding material — preferably bricks, blocks or containers filled with sand or earth — around the area, from the ground level up to the first floor, to form the "walls" of the shelter.
- On the floor above (inside the building), place additional shielding materials to form the "roof" of your shelter.
- Use supports to shore up the "roof," if necessary.



If you must take shelter in a hurry, get under something sturdy such as a table.



In general, indoor shelters are preferred. With some adjustments, your basement, crawl space or storm cellar can offer protection against fallout radiation.

- You may want to dig out your shelter area to make it deeper, so you can stand erect or at least sit up in it.

7. If you have no basement, crawl space or other underground shelter areas, as a last resort, you can improvise an outdoor shelter. See the expedient shelter plans at the end of this chapter.

8. If no better fallout protection is available, a boat with an enclosed cabin can be used. However, in addition to other emergency supplies, you will need a broom, bucket or pump-and-hose to wash or sweep off fallout particles that fall on the boat.

- The boat should be anchored or cruised slowly at least 200 feet offshore, in water at least five feet deep. This distance from the shore protects you from radiation released by fallout particles on nearby land. A five-foot water depth allows for sufficient absorption of radiation from particles falling into the water and settling on the bottom.

- Stay inside the boat as much as possible, going outside only to sweep or flush off any particles which have landed on the boat.

9. Make sure all improvised shelters offer enough ventilation — a must for removing carbon dioxide and keeping the inside air from getting too hot. Too much carbon dioxide causes dizziness, shortness of breath and nausea. High heat and humidity can cause collapse and even death.

- Air can go around corners, but dangerous radiation cannot easily do so. Make all air openings indirect to shield out the radiation given off by fallout particles.
- In very hot weather, you will need two ventilation openings: one to bring in fresh air and one at the opposite side to let out the stale air.
- Continuously ventilate the shelter with hand-held fans to reduce heat.

10. Listen for news reports to find out when it is recommended to relocate to a more permanent and protective shelter. Follow all instructions.



Expedient Above-ground Door-Covered Shelter

Build an above-ground shelter only if you cannot find shelter elsewhere and if you cannot build the trench shelter because of poor soil conditions.

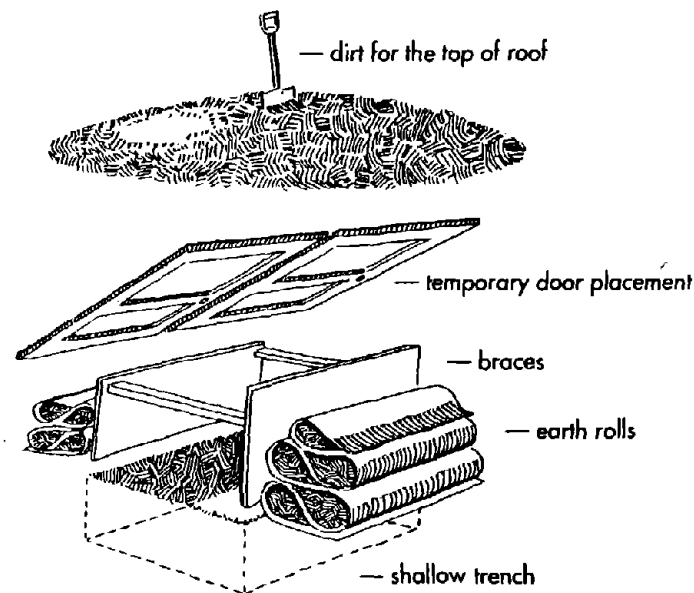
This shelter is designed for two people.

1. Select a site where there is little chance that water will pool or flood.
2. Remove the door knobs. Stake out the dimensions of the shelter by laying the doors side-by-side on the ground. Determine the exact length of the shelter. Allow one door for each person, plus one more door for the entry way at one end.
3. Set the doors up on edge, forming temporary walls to hold earth rolls in place. Brace the doors by placing 36-inch long sticks or boards between the two doors.
4. Dig a shallow trench inside the shelter about 36-inches wide and 14-inches deep. The length is determined by the number of doors you are using. If possible, make the trench up to three feet deep. By making the trench deeper, you can reduce the height of the earth-roll walls.
5. Pile earth rolls against bracketed doors. Make a roll on one side of the shelter, then on the other, to keep the heights equal and the doors from pushing out of their vertical positions.
6. When the earth rolls have reached the heights of about 24 inches on one side and 20 inches on the other, carefully remove the braces and door forms. Then use the doors as forms for the other ends of the shelter to make the earth-roll walls there.

7. Make a door frame for the entryway to the shelter out of four 2 by 4 inch boards nailed together. The frame should be about 22 inches wide.

8. Remove the doors from the end walls. Place the doors side-by-side to form the roof of the shelter.

9. Shovel about 15 inches of dirt on top of the roof doors. Make sure to cover the doors completely. Also pack some dirt about five inches high just inside the entryway to keep water from coming inside the shelter.

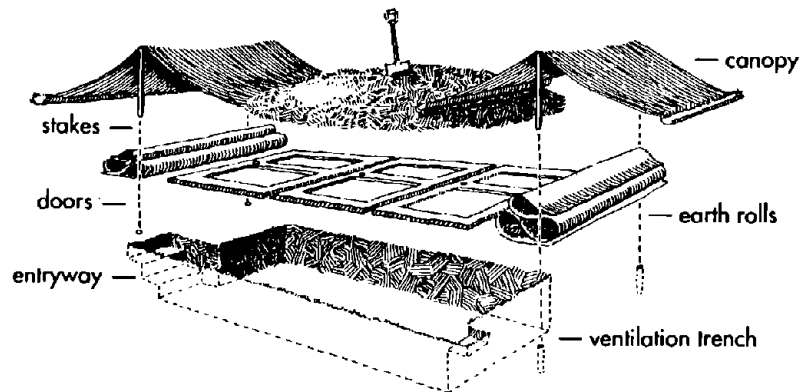


Expedient Door-Covered Trench Shelter

If you do not have access to a public fallout shelter and do not have a basement, crawl space or storm cellar, you can improvise a shelter to get protection from fallout.

This shelter is suitable for good soil conditions. Your site must be clear of tree roots and other obstacles to about four feet deep. The soil should not be too hard, frozen or wet to dig a four-foot deep trench.

Test the soil before you start: Dig a hole about eight inches wide and 10 inches deep. Remove loose dirt, then push your thumb into the soil at the bottom of the hole. If you can't push your thumb in deeper than about one inch, then continue. If you can, this site is not appropriate for a below-ground shelter.



This shelter is designed to hold three people and is three feet wide, three door-widths long and four and-one-half feet deep, with a shallow ventilation trench at one end and an entryway at the other end.

1. Select a reasonably level site. Make sure the site will not be flooded in case of rain. Clear away any brush, grass or weeds that are more than a few inches high from the area where you will dig your trench.
2. Take off all the knobs from the doors. To determine the length of the trench, lay all the doors down side-by-side. The trench should equal this width, *minus eight inches*—to leave a four-inch overlap on either end.
3. Stake out the length of the 36-inch wide rectangular trench according to the width of the doors. Stake out where the entryway will be at one end, and the ventilation trench at the other.
4. Dig out the main trench, the entryway trench and ventilation trench. After you've dug the main trench to a depth of about 18 inches, repeat the soil test. If the earth yields too much, select another site.
5. Continue digging to a 4 1/2 foot depth in the main trench, a 9-inch depth in ventilation trench and then form steps in the entryway trench. Do not allow the main trench to get narrower than three feet—you will need this space once you are in the shelter!

6. Level and smooth out the ground two feet around all sides of the trench, so that the doors will lie flat on the ground over the edges of the trench.

7. Place the doors over the trench, evenly spanning both sides of the trench and leaving a four-inch overlap on the ends.

8. If you have enough sheets, bedspreads, plastic, carpeting or other materials, line the trench wall with them, to create a more livable shelter.

9. Place your earth rolls and sandbags around all sides of the ventilation opening and the entryway.

10. Pile up the dirt about one foot deep over the doors, creating a mound that extends beyond the edges of the doors. Place plastic (or other rainproofing material) over the mound, and pile an additional 12 to 15 inches of dirt on top of this rainproofed roof.

11. Lay boards over the top of the ventilation trench and cover with dirt. Use an earth roll or sandbag to keep this dirt from falling into the trench.

12. Cover the two openings—the ventilation trench and entryway—with a canopy, so that fallout particles and rain do not get into the shelter. In hot weather, do not completely close off these openings. Drive stakes into the ground at either ends of the openings and tie a rope between each pair of stakes and place plastic or canvas over the rope or cord. Tie the corners down.

Earth Rolls and Improvised Sandbags

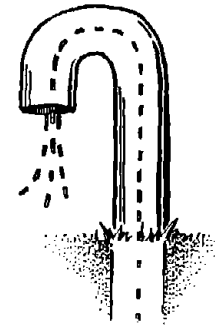
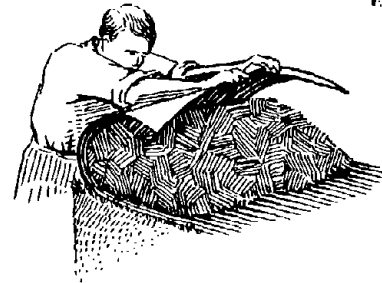
You may need “earth rolls” or improvised sandbags to use as a shielding material for your shelter.

Make earth rolls by folding or rolling dirt in between cloth or plastic material. You can also fill pillowcases, sacks or plastic garbage bags with dirt to make sandbags.


When you make earth rolls, be sure to create a “hook” by leaving some materials uncovered by dirt, then drape the cloth back over the mound. See the earth roll illustrations on the improvised shelter diagrams.

Shelter living during any emergency

1. Stay in your shelter until local authorities tell you it is permissible or advisable to leave. The length of your stay can range from a few days to as long as two weeks.
2. Whether you are in a home or public shelter, water and food may be scarce. Recognize that normal sanitary conditions may be difficult to maintain.



Make sure you allow for adequate ventilation. Air can go around corners, but dangerous levels of radiation cannot, so make all air openings indirect.



3. Smoking should be restricted to well-ventilated areas. Smoking creates a fire hazard and discomfort for non-smokers.

4. Cooperate with shelter managers. Living with many people in a confined space can be difficult and unpleasant.

- Efforts are made by local authorities to place trained shelter managers and, in case of a nuclear power plant accident, radiation monitors in public shelters. These people know how to measure radiation and understand sanitation, ventilation, water and food needs.

5. If you are staying in a shelter due to a nuclear emergency, follow these guidelines.

- All the items you will need for a two-week stay need not be stocked inside the shelter itself but can be stored elsewhere, as long as you move them quickly to the shelter.

- Maintain a 24-hour communications and safety watch. Take turns so that someone is available at all times to watch for fires, listen for important radio information and monitor radiation levels, if instruments are available.

Managing water and food in a shelter during any emergency

1. Keep these water management guidelines in mind:

- Save water for drinking and medical emergencies.

- Water is critical for survival. Allow people to drink according to their need. Each person's need for drinking water will vary depending on age, physical activity, physical condition and time of year.

- The *average* person should drink between two and two-and-one-half quarts of water or other liquids per day, but many people need more. Under no circumstances should water be rationed so that individuals receive less than one quart each day. It is better to use whatever water is available, in the hope of finding more, than it is to deprive people of what they need for survival.

2. Other than the water you have stored in containers, try other sources which are available in most homes:

- Ice cubes, milk, soft drinks, fruit and vegetable juices.
- Water in the hot water tank (20 to 60 gallons).
- Water in the flush tanks (not the bowls) of home toilets.

3. If local authorities advise it, turn off the main water valves in your home. This prevents water from draining away, in case of break and loss of pressure in the water mains.

- Even with the main valve in your house closed, all the pipes in a house are still full of water.
- To use this water, turn on the faucet at the *highest point* in your house (which lets air into the system). Then draw water, as needed, from the faucet located at the *lowest point* in your house.

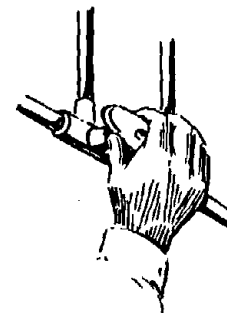
4. First drink water that you know is uncontaminated. If necessary, suspicious water, such as cloudy water from regular faucets or muddy water from a nearby stream or pond, can be used after it has been purified. Put off drinking suspicious water as long as possible, but do not become dehydrated. To purify water:

- Strain the water through paper towels or several thicknesses of clean cloth. This removes most

of the dirt and particles. You can also let the water settle in a container for 24 hours. By this time, most solid particles will sink to the bottom of the container. Filtering is crucial to remove contaminants that may be resistant to chlorination.

- After solid particles have been removed, either boil the water for three to five minutes or add a water-purifying agent to it. Surface water should always be boiled, if possible. Use water purifying tablets, two percent tincture of iodine or liquid chlorine household bleach (if the label lists hypochlorite as its only active ingredient). In general, purification by boiling water is preferred.
- For each gallon of water, use four water purifying tablets or 12 drops of tincture of iodine or eight drops of liquid chlorine bleach. If the water is cloudy, double these amounts.

5. Carefully ration everyone's food except that of children and pregnant women.



Local authorities may advise you to turn off the main water valves in your home.

- Most people in shelter can get along with about half as much food as usual and can survive without food at all for several days, if necessary.

6. It is especially important to be sanitary in the storing, handling and eating of food.

- Keep food in covered containers.
- Keep cooking and eating utensils clean.
- Keep all garbage in a closed container and dispose of it outside the home when it is safe to go outside. If possible, bury it. Avoid letting garbage or trash accumulate inside the shelter, both for fire and sanitation reasons.

Sanitation in a shelter during any emergency

1. In many shelters, people will need to use improvised, emergency toilets if the water supply has been cut off. This kind of toilet consists of any watertight container with a snug-fitting cover.

- Use a garbage container, pail or bucket.

- If the container is small, keep a large container (also with a cover) available for waste disposal.
- If possible, line both containers with plastic bags.
- Every time the emergency toilet is used, pour or sprinkle a small amount of regular household disinfectant, such as creosol or chlorine bleach, into the container to reduce odors and germs.
- After each use, replace the lid.

Leaving the shelter

1. In any emergency, especially a nuclear emergency, stay in the shelter until you are told you may come out.

2. When you are staying in a shelter after a nuclear attack or nuclear power plant accident, listen to your battery-powered radio or shelter manager for all instructions.

- The length of your stay will depend on the intensity of the fallout radiation in your area.
- The Federal government supplies states with special instruments to detect fallout radiation and to measure its intensity.

- Low-cost instruments to detect and measure fallout radiation are not generally made available for home shelter use, but they can be purchased.
- As time passes, radiation levels will decline to a point where you can leave the shelter for short periods of time to perform emergency functions.

For more information

Contact your local civil defense or emergency management office or the Federal Emergency Management Agency, P.O. Box 70274, Washington, D.C. 20024, ATTN: Publications, for the following publications. (Single copy requests only.)

FEMA 183 (September 1989). Hosting in an Emergency. Information for citizens who may be willing to host evacuees in an emergency.

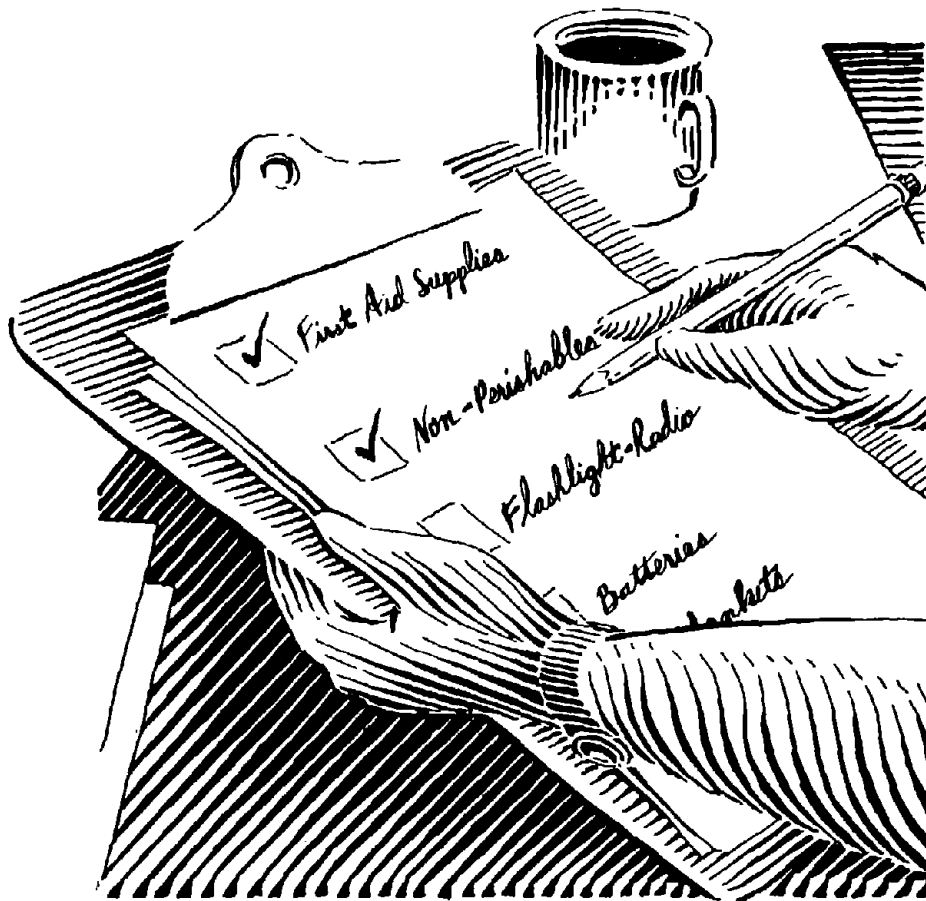
Emergency Preparedness Checklist (L-154). Also available in Braille or recorded versions. This pamphlet provides general information for personal and family preparedness for a variety of natural and man made disasters.

Home Shelter (H-12-1). An outside underground fallout shelter.

Above-ground Home Shelter (H-12-2). An outside above-ground fallout shelter for use in areas with a high water table.

Home Blast Shelter (H-12-3). An outside, underground blast shelter.

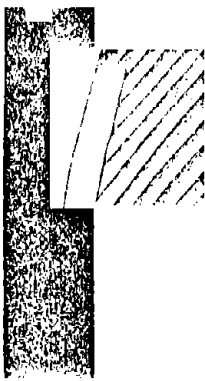
Home Shelter (H-12-4). An outside, underground shelter that provides protection against nuclear fallout radiation and tornados.



Emergency Planning and Checklists

In a 1987 national survey, 26 percent of the people interviewed said that they had experienced some disaster such as a tornado, flood or earthquake in their lifetimes.

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The emergency supplies listed in this chapter will help you and your family prepare for evacuation and stays in-house or in public shelters during emergencies ranging from floods and hurricanes to a nuclear attack.

For any emergency. Make a list of items you can gather only at the last minute, such as prescriptions or medication or eyeglasses. You may have only minutes to leave and be unable to think clearly, so identify where the items usually can be found.

Emergency evacuation. During most serious, non-nuclear emergencies, families may need to be self-reliant for about three days. Using the checklists that follow as guidelines, put together containers or "emergency kits" for each member of your family. The container of your kit should be small enough for an individual member of your family to carry easily. Try using buckets, backpacks or duffel bags.

In-home shelter. Preparing emergency supplies may be crucial if you or your family are forced to stay in your house during an emergency, such as a winter storm. You need to be prepared if utilities are

temporarily cut off or if hazardous conditions prevent you from leaving your house.

Shelter during nuclear attack. In the event of a nuclear attack, families should plan to live in shelters to protect themselves from radioactive fallout. People living near a potential nuclear target would need to evacuate first and then take shelter in an area not considered a likely target. They should have on hand as much water as possible and provide for their own food supplies, for at least two weeks and possibly longer. Take special notice of items in italics that apply only to nuclear attack preparations.

Water, food and utensils

- Water — one gallon of water per person per day, for drinking, cooking, washing and sanitation. Store as much water as possible in non-breakable containers, such as soft drink containers or milk jugs.
- Food — non-perishable, needing little or no cooking; high nutrition-type with little waste.
- Special dietary foods, if needed
- Eating and drinking utensils, non-breakable



- Bottle and can openers
- Water purifying tablets, two percent tincture of iodine or household bleach (hypochlorite-type only)
- A heating source, such as a camp stove or canned heat stove, and extra fuel

Communication, lighting, safety

- Battery-operated radio
- Extra batteries
- Lantern and fuel
- Flashlights, candles
- Fluorescent distress flag
- Matches (in waterproof container)
- Citizen's Band radio
- Fire extinguisher

Clothing and bedding

- One complete change of clothing for each person, appropriate for season and weather conditions
- Sturdy work clothes
- Sturdy shoes
- Extra socks
- Extra underwear
- Outer-wear: rain gear, coats, jackets, boots, ponchos
- Pillows

- A sleeping bag or two blankets per person

Personal Items

- Washcloth and small towel
- Reading and writing materials
- Sewing kit
- Soap, toothbrushes, toothpaste, deodorant
- Small toys for children
- Hair care items
- Insect repellent and insecticide
- Mirror
- Contact lens solution
- Dentures
- Shaving kit
- Sanitary napkins and tampons

Sanitary needs

- Paper towels and toilet paper
- Detergent
- Disinfectant
- Garbage can or bucket with tight-fitting lid (for emergency toilet)
- Plastic garbage bags (for lining toilet)



Baby supplies, if needed

- Clothes
- Diapers
- Milk or formula
- Powders, creams or ointments
- Bottles and nipples
- Food
- Small toys
- Sheets, blankets, rubber pads
- Portable crib

First aid supplies

Keep contents of first aid kit in a waterproof metal or plastic box. Keep medicines tightly capped. Check periodically and replace any medication which has passed its expiration date.

- Adhesive tape rolls, two inches wide.
- Applicator — sterile, cotton tips
- Antacid
- Antibiotic ointments
- Antiseptic solution
- Aspirin or aspirin substitute
- Baking soda
- Bandage — sterile roll, two inches wide
- Bandage — sterile roll, four inches wide
- Bandages — large triangular, 37 inches by 37 inches, by 52 inches

- Bandage — plastic strips, assorted sizes
- Cotton balls
- Diarrhea medication
- Eye medication
- First aid handbook
- Hot water bag
- Ice bag
- Iodine water purification tablets
- Isopropyl alcohol
- Laxatives
- Medical items such as spare eyeglasses, contact lens needs, hearing-aid batteries, etc.
- Medical alert tags, if needed for epilepsy, drug allergies, etc.
- Medicine dropper
- Motion sickness tablets for nausea
- Non-prescription medicines
- Nose drops (water soluble)
- Petroleum jelly
- Plastic bags with fasteners
- Prescription medicines (insulin, heart pills, etc., as needed)
- Safety pins — assorted sizes
- Scissors
- Smelling salts
- Antibacterial soap
- Splints — wooden, 18 inches long
- Table salt
- Toothache remedy
- Thermometer
- Tweezers



Papers and valuables

- Social Security cards
- Birth certificates
- Marriage and death records
- Driver's license
- Cash and credit cards
- Wills
- Insurance policies
- Deeds
- Stocks and bonds
- Savings and checking account books
- Inventory of household goods (photos preferred)
- Small valuables: cameras, watches, jewelry, etc.

Library

- Newspaper or emergency public information articles
- Plans for expedient shelters
- Medical self-help books
- Civil defense manuals
- Survival books
- Other reading materials

Tools and equipment for building a fallout shelter

- *Work gloves*
- *Shovel*
- *Axe*
- *Pick*
- *Saw*
- *Hammer*
- *Knife*
- *Nails, screws, fasteners*
- *Crowbar, pry bars*
- *Bucket*
- *Wire — heavy, medium, light*
- *Rope — heavy, medium, light*
- *Wrenches, screwdrivers, pliers, wire cutters*

Additional items of your own or last-minute necessities



For More Information

Contact your local civil defense or emergency management office or the Federal Emergency Management Agency, P.O. Box 70274, Washington, D.C. 20024, ATTN: Publications, for the following publications. (Single copy requests only.)

FEMA Publications Catalog (FEMA-20).

This catalog lists FEMA publications designed to help citizens plan for and respond to disasters and emergencies of all types.

In Time of Emergency — A Citizen's Handbook (H-14). A shorter version of *Are You Ready? Your Guide to Disaster Preparedness* with information about how families can prepare for disaster.

Emergency Preparedness Checklist (L-154). Also available in Braille or recorded versions. This pamphlet provides general information for personal and family preparedness for a variety of natural and man made disasters.

Coping with Children's Reactions to Hurricanes and Other Disasters (FEMA-184) Spanish Edition (FEMA-185). This pamphlet is designed to help parents deal with children's fears and anxiety following a disaster.

To obtain the following Home Study Courses, write to: FEMA Home Study Program, Administrative Office, Emergency Management Institute, 16825 South Seton Avenue, Emmitsburg, MD 21727.

The EMI Home Study Course Brochure (L-173). This brochure lists all home study courses offered by FEMA's Emergency Management Institute.

Emergency Management, U.S.A. — Home Study Course (L-125). This pamphlet is used to enroll in a home-study course that describes natural and technological hazards and the nuclear attack threat. The course leads the individual through the development of personal emergency preparedness plans and encourages volunteer participation in the emergency management network.

Preparedness Planning for a Nuclear Crisis — Home Study Course (L-149). This pamphlet is used to enroll in a home study course that covers the effects of nuclear weapons, evacuation and sheltering, preparing and stocking a fallout shelter, and how to develop emergency plans to improve the chances of surviving a nuclear attack.

Radiological Emergency Management — Home Study Course (L-125). This pamphlet is used to enroll in a home study course covering response strategies to radiological emergencies, radiological transportation accidents, nuclear power plant accidents and nuclear attack.

Hazardous Materials: A Citizens Orientation — Home Study Course (L-167). A pamphlet providing information and an application to enroll in this home study course.

The following publications are available by writing the National Weather Service, 1325 East West Highway, Silver Spring, MD 20910, (301) 427-7622.

Public's Guide to General Weather Information, #79013.

Dust Storm Driving Safety (wallet card), #82002.

Watch Out Storms Ahead, #82004.

Heat Wave, #85001.

